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Imlifidase for Kidney Transplantation of Highly Sensitized Patients With a Positive Crossmatch: The French Consensus Guidelines

By: Dave Lowe, PhD, FRCPath
Senior Director, Research & Development
Thermo Fisher Scientific

Key takeaways

- Defines the criteria for harmonization of patient selection, associated treatments, and follow-up
- Decision to use imlifidase is reliant upon the MFI values of the immunodominant donor specific antibodies
- Highlights the importance of dilution testing in ascertaining a more adequate reflection of antibody strength

Background

Imlifidase is a recombinant cysteine protease derived from Streptococcus pyogenes which has the ability to cleave all classes and human IgG into F(ab')2 and Fc fragments within 4-6 hours following administration. Additionally, Imlifidase can act upon the IgG of the B-cell receptor and thus may abrogate the memory B cell response to antigenic stimulation. Consequently, Imlifidase has recently received early access authorization in France to be used as a desensitization strategy for highly sensitized patients. This article summarises the recent publication outlining the French guidelines to define the use of Imlifidase, including patient selection criteria, monitoring frequencies, and associated treatment recommendations.

The Recommendations:

Eligible patients must have cPRA>98%, be under 65 years of age, and have been on the waitlist in excess of 3 years. The final decision to proceed with Imlifidase treatment rests upon the MFI levels of the immunodominant donor specific antibodies (DSAs). Firstly, the immunodominant antibody must be >6000 MFI, however this must be reduced to a maximum of 5000 after testing at 1:10 dilution. The guidelines recommend that this testing be performed using the One Lambda LABScreen single antigen assay. Secondly, the post-imlifidase serum much be complement dependant cytotoxic (CDC) crossmatch negative.

Post-transplant, the guidelines recommend that antibody testing is performed frequently alongside surveillance biopsies in order to effectively monitor DSA rebound and the early detection of subclinical rejection.

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Conclusion

Imlifidase has the potential to be a breakthrough treatment option for highly sensitized patients. However, more clinical data is required to be in a position to refine the protocols to optimize the use of this novel therapeutic. These French guidelines represent the start of the process needed to acquire this information.

References

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